

We Claim:

1. A method for detecting commercials in a compressed video stream, the
5 method comprising the steps of:
compressing video data and generating compressed video data;
detecting a plurality of separators based on said generated compressed data, each
of said separators is defined by at least two consecutive scene changes;
determining the beginning and ending of a commercial break among said plurality
10 of separators by comparing a gap between said plurality of separators.

2. The method of claim 1, wherein the step of determining the beginning and
ending of a commercial break further comprises the steps of:
identifying one of said separators as the beginning of a commercial break when
15 the gap between said one separator and a previous separator is greater than a
predetermined threshold value.

3. The method of claim 2, further comprising the step of identifying one of
said separators as the ending of a commercial break when the gap between said one
20 separator and a next separator is greater than said predetermined threshold value. (no:
when the gap between the separator and the next one is greater that a predetermined
threshold)

4. The method of claim 1, wherein said plurality of separators is inserted into said video data at a transmitting source.

5. The method of claim 1, wherein the step of detecting said plurality of separators in said compressed video data includes identifying an abrupt increase in an average Mean Absolute Difference (MAD) value of said generated compressed data.

6. The method of claim 1, wherein the step of detecting said plurality of separators in said compressed video data is performed based on an increase in an average Mean Absolute Difference (MAD) value of said generated compressed data.

7. A method for detecting commercials in a compressed video stream, the method comprising the steps of:

encoding incoming video data received from a transmitting source to generate compressed video data;

detecting a plurality of separators in said compressed video data, each of said plurality of separators including at least two consecutive scene changes according to said compressed video data;

determining the beginning and ending of a commercial break by comparing a gap between said plurality of separators to a predetermined threshold value;

identifying one of said separators as the beginning of a commercial break when the gap between said one separator and a previous separator is greater than said predetermined threshold value; and,

identifying one of said separators as the ending of a commercial break when the gap between said one separator and a next separator is greater than said predetermined threshold value.

5 8. The method of claim 7, wherein said plurality of separators is selectively inserted into said video data at said transmitting source.

9. The method of claim 7, wherein the step of detecting said plurality of separators in said compressed video data is performed based on a change in an average
10 Mean Absolute Difference (MAD) value of said generated compressed data.

10. An apparatus for detecting commercials in a compressed video stream, comprising:

15 a video encoder for receiving uncompressed video data and generating compressed video data;
 a detector for detecting a plurality of separators in said compressed video data;
 a processor configured to edit said compressed video data by identifying the beginning and ending of a commercial break in said compressed video data; and,
 a playback selector for editing said compression video data to skip said
20 commercial break for a subsequent viewing.

11. The apparatus of claim 10, further comprising a memory for storing said compressed video data with the identification of the beginning and ending of said commercial break.

5 12. The apparatus of claim 10, further comprising a decoder for generating decompressed video data.

13. The apparatus of claim 10, wherein said compressed video data includes an identifier of a presence of a sequence of uni-color frames.

10 14. The apparatus of claim 10, wherein said compressed video data includes an identifier of a transition between a television program and said commercial break.

15 15. The apparatus of claim 10, wherein said compressed video data includes an identifier of a transition between the successive commercial programs.

16. The apparatus of claim 10, wherein said compressed video data includes an identifier of at least two successive scene cuts.

20 17. The apparatus of claim 10, wherein said detector detects said plurality of separators based on an abrupt change in an average Mean Absolute Difference (MAD) value of said generated compressed data.

18. The apparatus of claim 10, wherein said compressed video data includes at least one of a quantizer scale, motion vector data, bit rate data, a variation of luminance within a frame, a variation of color within a frame, a total luminance of a frame, a total color of a frame, change in luminance between frames, a mean absolute difference, and a
5 quantizer scale.

19. The apparatus of claim 10, wherein said processor is programmed to identify an indicator of at least two scene cuts in said uncompressed video data and to generate an identifier of the location in a sequence of said compressed video data
10 coinciding with said indicator of at least two said scene cuts.